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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,644	03/25/2004	Timothy J. Magnuson	MAGN-26,326	6117

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EXAMINER	
RAJAN, KAI	

ART UNIT	PAPER NUMBER
3769	

NOTIFICATION DATE	DELIVERY MODE
01/25/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@dalpat.com

Office Action Summary	Application No.	Applicant(s)	
	10/808,644	MAGNUSON ET AL.	
	Examiner	Art Unit	
	Kai Rajan	3769	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *August 19, 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *3,9 and 16-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-8 and 10-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application.
6) ☐ Other: _____.

DETAILED ACTION

Examiner acknowledges the response filed August 19, 2009.

Response to Arguments

Applicant's arguments filed August 19, 2009 have been fully considered but they are not persuasive. First, the claims are still rejected under 35 USC 101 and 35 USC 112, first and second paragraphs, see below. Second, Applicant contends that the applied prior art fails to disclose input of perceived information. The Examiner respectfully disagrees. Examiner has further explained his interpretation of the art as applied to the claims (see below). In summary, Nihtila discloses the input of diet and age information, both of which are perceived information. The amount and type of food ingested by an individual is information input by the individual, and is also a parameter of metabolism since different foods such as fats and carbohydrates affect metabolism differently. Age is also perceived information since it is not measurable by sensors but is instead input by the individual according to his or her own knowledge of their duration of life. Furthermore, age is a parameter of metabolism, since it is well known that age affects the rate of metabolism of an individual. Applicant states that the prior art is "not concerned with perceptions of an individual as to whether they feel pain or whether they are out of breath, etc." However, such perceived events have not been claimed, and "perceived physiologic parameters of physiologic metabolism" is not defined in the specification as comprising such information. Therefore, in light of the response to arguments above and the added explanation of Examiner's

interpretation of the art (see below), the applied prior art is sufficient to reject the claims as currently presented.

Claim Rejections - 35 USC § 101

Claims 1, 2, 4 – 8, and 10 – 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In particular, claims 1, 2, 6 – 8 and 10 – 15 are drawn to a process. Under 35 U.S.C. §101 a process must 1) be tied to another statutory class (such as a particular apparatus) performing the essential steps of the process **or** 2) transform underlying subject matter (such as an article or materials) to a different state or thing.

First, the method steps do not recite the apparatus performing essential steps. While claim 1 recites "sensors" measuring physiologic data, the steps of processing the input vector and outputting a prediction of wellness are not tied to an apparatus or another statutory class. A "model" in this case is regarded as software, which is intangible and not an apparatus.

Second, the process steps do not transform a particular article. Steps of collecting data, processing the data, and outputting a prediction are calculation steps, and do not result in a physical transformation.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the Examiner could not find support within the written disclosure for sensed measured physiologic parameters and determined perceived physiologic parameters "determined temporally *proximate* to each other". The Applicant points to figure 2 and paragraph 0017 of the specification for support of the claim limitation. However, the Examiner is unable to find language within the paragraph, let alone the rest of the specification, or disclosure in the figures to support Applicant's explanation of measurements collected in a "proximate" time to one another. Rather, figure 2 shows input vectors x(t) and control vector x(t+1). The specification discloses that inputs are received, and in a time order as denoted by x(t). Yet this disclosure does not support the inputs received *proximate* (very closely) in time to one another, just that they are received at some point in time. Therefore, the Examiner has interpreted the limitation in question to require at least two inputs that are received by the system at some point in time.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 4 – 8 and 10 – 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the written disclosure provides no explanation

or detail for the term "parameters of physiologic metabolism." The term renders the claims indefinite since it is unclear as to what the applicant claims as the invention regarding measured parameters. The Applicant points to paragraph 0126 for clarification. While metabolism is linked to "drugs, fats, carbohydrates, etc. [ingested] over time," this paragraph does not define what a *parameter* of physiologic metabolism comprises. In light of Applicant's remarks, the Examiner has interpreted "perceived physiologic parameters of the physiologic metabolism" to comprise inputs related to the ingestion of food such as a diet log, since a diet log is a list of events perceived by the individual, and food is a factor of metabolism.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, and 12 – 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Nihtila U.S. PGPub No. 2004/0002634.

Note to Applicant: See previous action for rejection of unaddressed dependent claims, as they are rejected on substantially the same basis.

1. A method for monitoring with a system the wellness state of a given human body of a person, comprising the steps of:

sensing with system sensors measurable physiologic parameters of the physiologic metabolism of the given human body (Paragraph 0029 at least heart rate is measured, which is an integral physiologic parameter of metabolism);

determining perceived physiologic parameters of the physiologic metabolism of the given human body through an interface system with the human brain associated with the given human body, which perceived physiologic parameters are parameters relating to the physiologic metabolism of the given human body that can only be determined by interface of the human brain with the physiologic metabolism of the associated given human body (Paragraph 0008, 0030, 0034 caloric consumption data is entered into the system which comprises amounts of fats and carbohydrates perceived by the user. Furthermore, age is a perceived physiologic parameter, since it is known by the person and is not a medical parameter that may be measured by a sensor. Age is also a well known factor of metabolism equations and models);

wherein the sensed measured physiologic parameters and the determined perceived physiologic parameters comprise an input vector determined temporally proximate to each other (Paragraphs 0008, 0029 – 0032, 0034 caloric consumption and measured parameters such as heart rate are input into the system, and measurements are taken continuously or at certain times of day); and

processing the input vector through a model of the given human body that is trained on a training data set comprised of historical measured physiologic parameters of the physiologic metabolism of the given human body that are sensed over time in conjunction with historical

perceived physiologic parameters of the physiologic metabolism of the given human body, wherein the input vector comprises less than the set of historical measured physiologic parameters and the set of historical perceived physiologic parameters, the output of the model providing a prediction of wellness of the given human body (Paragraphs 0029 – 0033 collected data and patient information is processed into fitness data that shows a physiological avatar reflecting changes in the patient's fitness and wellness, including predictions of the patient's wellness based on historical data).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6 – 8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nihtila U.S. PGPub No. 2004/0002634 in view of Kaylor et al. U.S. PGPub No. 2004/0078219.

In regard to claims 6 – 8, Nihtila discloses a system and method for evaluating the physical condition and health of an individual by processing sensed parameters. Nihtila fails to disclose measuring and processing environmental parameters. However Kaylor et al. a reference in an analogous health care art discloses measuring pollen content, humidity, and air temperature

(Kaylor et al. paragraph 0231). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the sensed parameters of Nihtila to include the environmental parameters of Kaylor et al., since Kaylor et al. states that healthcare can be enhanced by monitoring and controlling the quality of the environment of the individual (Kaylor et al. paragraph 0231).

In regard to claims 10 and 11, Nihtila fails to explicitly disclose processing data using neural networks. However, Kaylor et al. a reference in an analogous health care art discloses using neural networks to process measured physiological data to produce mathematical models of an individual's health (Kaylor et al. paragraph 0038). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Nihtila with the neural networks of Kaylor et al., since Kaylor et al. states that neural networks provide improved results and levels of predictability, and neural networks are well known in the art for processing larger quantities of raw data (Kaylor et al. paragraph 0038).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kai Rajan whose telephone number is (571)272-3077. The examiner can normally be reached on Monday - Friday 9:00AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Johnson can be reached on 571-272-4768. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kai Rajan/
Examiner, Art Unit 3769

/Henry M. Johnson, III/
Supervisory Patent Examiner, Art Unit 3769

January 15, 2010